

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 November 2004 (11.11.2004)

PCT

(10) International Publication Number
WO 2004/096846 A2

(51) International Patent Classification⁷: **C07K 14/435**

(21) International Application Number:
PCT/US2004/012354

(22) International Filing Date: **23 April 2004 (23.04.2004)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
60/465,149 24 April 2003 (24.04.2003) US

(71) Applicants and

(72) Inventors: **SESSA, William, C.** [US/US]; 4 Richborough Rd., Madison, CT 06443 (US). **ACEVEDO, Lisette** [US/US]; 750 Whitney Ave., #B7, New Haven, CT 06511 (US).

(74) Agents: **HALEY, James, F., Jr. et al.**; Fish & Neave, 1251 Avenue of the Americas, New York, NY 10020 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): **AE, AG, AL, AM,**

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): **ARIPO** (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), **Eurasian** (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), **European** (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), **OAPI** (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

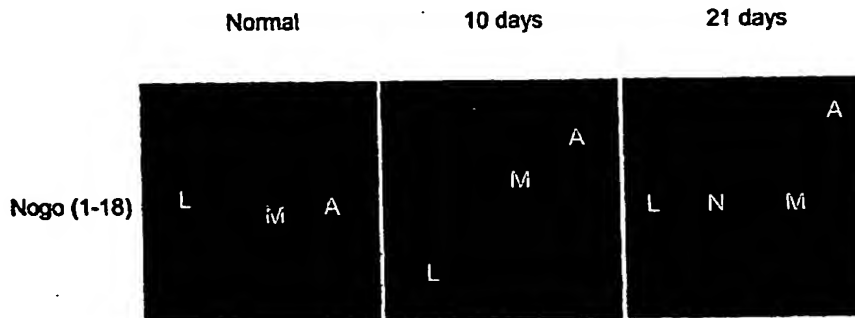
Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **A NOVEL REGULATOR OF ENDOTHELIAL CELL FUNCTION AND VESSEL REMODELING**

Nogo expression decreases after injury and by 21 days is almost completely gone from vessel wall



(57) Abstract: The present invention relates to previously unknown biological roles of Nogo-B. We have discovered that Nogo-B is a component of endothelial cells. We have also discovered that Nogo-B is highly expressed in intact blood vessels. The amino terminus of Nogo-B promotes the adhesion, spreading and migration of endothelial cells and plays a role in vascular remodeling. Thus, Nogo-B is a novel regulator of vascular homeostasis and remodeling. The present invention provides compositions comprising Nogo-B and fragments and fusion proteins thereof. The present invention also relates to nucleic acids encoding Nogo-B and fragments and fusion proteins thereof, as well as vectors and cells comprising such nucleic acids. The present invention also relates to antibodies specific for Nogo-B and fragments and fusion proteins thereof. The present invention also provides methods for preventing, detecting and treating Nogo-B-related diseases, disorders and conditions.